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CERTIFICATE OF MAILING BY FIRST CLASS MAIL (37 CFR 1.8)

Applicant(s): A. W. Chester, et al.

Docket No.

10061-1

Serial No.

09/144,607

Filing Date

August 31, 1998

Examiner

N. Preisch

Group Art Unit

1764

Invention: GASOLINE SULFUR REDUCTION IN FLUID CATALYTIC CRACKING

I hereby certify that this IDS/FEE SHEET

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10061-1



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

#15
9/6/00

Application of : A. W. Chester et al
Serial No. : 09/144,607
Filed : 31 August 1998
For : Gasoline Sulfur Reduction in Fluid Catalytic Cracking
Group Art Unit : 1764
Examiner : N. Preisch

Information Disclosure Statement

Fairfax, Virginia 22037

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir,

The attached From PTO-1449 identifies two references which should be considered in the examination of this application.

These references were cited earlier this year by the Australian Patent Office but since more than three months has now elapsed since their citation, it is necessary for applicants to pay the fee under 37 CFR 1.97(c). The attached fee sheet requests payment of the fee.

Cornier, U.S. 5,371,055, relates to the use of metal trap components in FCC operations for the reduction of the deleterious effects of metals such as nickel and vanadium (column 1, lines 16 – 20) together with a sulfur oxide reduction material, normally a magnesium aluminum spinel (lines 18 – 20). The preferred metal trap is a bastnaesite material (column 2, line 25; column line 65 – column 6, line 32) although calcium titanate and calcium perovskite may also be used (column 5, lines 39 – 50). The preferred metal trap, bastnaesite, is rich in rare earth components (column 6, lines 1 – 14) and it is reported that these rare earth cations do not transfer under conditions of use to the zeolite of the cracking component (column 6, lines 14 – 19). The spinel component, which may contain a

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rare earth such as cerium (column 9, lines 1 – 19), is used as a sulfur transfer material, that is, a material which converts sulfur from sulfur oxide in the FCC regenerator to hydrogen sulfide in the reactor zone (column 4, lines 22 – 31). The spinel does not reduce the sulfur level in the liquid cracked product: it merely reduces the sulfur oxide emissions from the regenerator stack gas.

U.S. 4,325,811 (Sorrentino) relates to the reduction of sulfur oxide levels in FCC stack gases. It achieves this end by the use of a sulfur oxide transfer material which is cycled between the FCC regenerator and a reducing zone in which it is contacted by hydrogen or a reducing gas. The sulfur oxide transfer agent is an oxide such as magnesia or alumina (column 13, lines 6 – 17) compounded with a rare earth (line 13); see also Example 1. It is also stated that the zeolite cracking component may contain a rare earth metal (column 11, line 56 – column 12, line 20).

August 21, 2000

Respectfully submitted,



Malcolm D. Keen

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10061-1



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GP 17648

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of : A. W. Chester et al
Serial No. : 09/144,607
Filed : 31 August 1998
For : Gasoline Sulfur Reduction in Fluid Catalytic Cracking
Group Art Unit : 1764
Examiner : N. Preisch

Fee Sheet

Fairfax, Virginia 22037

Assistant Commissioner for Patents
Washington, D. C. 20231

Sir:

Please charge the following fee to DEPOSIT ACCOUNT NO. 19-3150:

IDS Submission Fee, 37 CFR 1.17 (p)

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A duplicate copy of this request is enclosed.

August 21, 2000

Respectfully submitted,

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